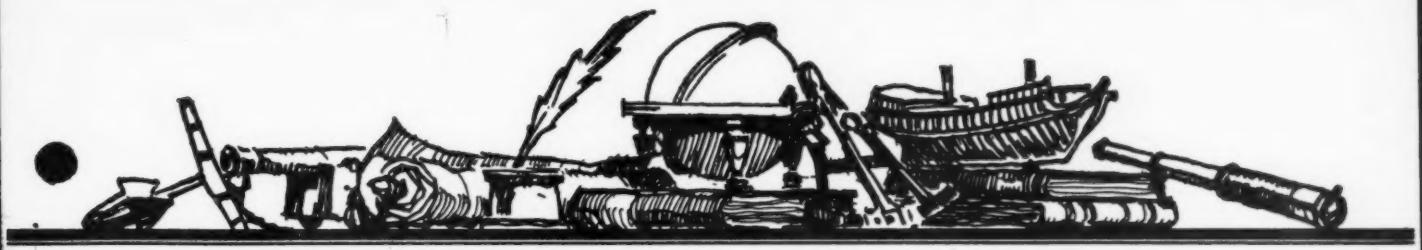

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HARRY D. HAMILTON, SEC'TY-TREAS., 15004 E. GRANADA AVE., WHITTIER, CALIFORNIA

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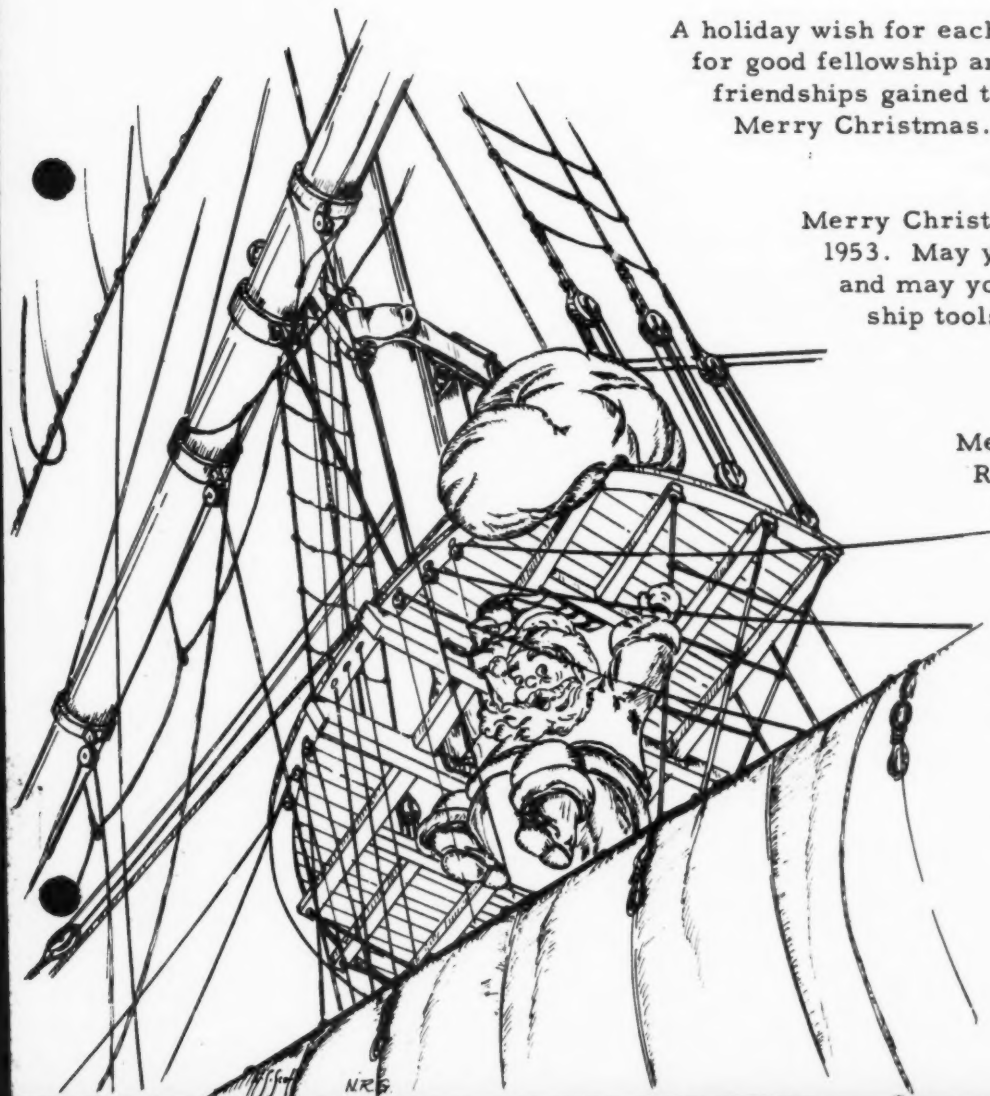
Merry Christmas



A holiday wish for each member of NRG is one for good fellowship and the joys of enduring friendships gained thru our mutual interests. Merry Christmas.

John J. Flynn

Merry Christmas to all and to all a good 1953. May your nautical library increase and may your sock be filled with those ship tools that you need.

Harry D. Hamilton

Merry Christmas; Good Research and Good Ship Modeling for the year 1953.

Bruce Grant

With hope that our fellowship may continue thru many years. A Wish for a Merry Christmas.

H. S. Scott

Merry Christmas to all our members in the Armed Forces and a speedy return to their shops.

Hazel B. Gemmell

THE FIRST CLIPPER AND MEN OF THE CLIPPER SHIP AGE

By Willis L. Nye

Among those who dwell on maritime lore, it is generally conceded that the good ship ANN McKIM was the original prototype for that class of global sailer known as the clipper ship. The ANN McKIM was built in Baltimore in 1832 for the account of Isaac McKim of that city. She was fully rigged, lower sails square on all three masts, with a tall tapering sail plan which was generally favored in later years as essential to speed sailing. The ship was a wet one in choppy seas due to the low freeboard. The lines were rakish at the stem and the sternposts. The masts were raked. The tonnage was 493 gross and the overall of the hull was 143 feet by 31 beam. The depth of the hold was 14 feet. The hull drew 11 feet forward and 17 feet aft. The ship was designed for the China Trade and inherited to some extent the characteristics of the original Baltimore Clipper.

But why was this radical design of ship and sail plan evolved which was not only expensive to construct but also to man with a crew? If one cares to recall history, it should be noted that during the 16th, 17th, and the first part of the 18th centuries, the major European Nations were struggling for supremacy of the sea in order that the fruits of colonial conquests could be realized. The struggle for sea power had to be waged on a defensive pattern in order to protect merchantmen sailing from overseas to the home country. In order to safeguard the cargoes, slow broadbeamed sailing ships were the order of the day. The sluggish handling characteristics of these early prototypes of the modern freighter had to be protected. The surest method of protection was the security gained by ships sailing in convoy. Thus as long as the convoy system prevailed, the need for fast sailers was obviated. Thus warship design and merchantship design were basically at a variance in technical characteristics insofar as sailing qualities were concerned. With the cessation of sea fighting, the need for convoys still prevailed because of piracy which was widespread on the high seas. When the British Admiralty in concert with the other maritime nations decreed that piracy on the high seas was outlawed and eradicated by naval action, there arose a condition of tranquility which influenced merchant ship design, and thus the clipper ship was born.

The primary objective of the clipper ship was to transport a high priority cargo at a maximum of speed. Operational costs were of secondary importance. Thus with colonial empires expanding, the economics of raw materials being transported to the industrial nations became important. And every other consideration of cost or economy was sacrificed. Consequently with the cessation of sea struggles and piracy and the advent of the industrial age which required a greater availability of raw materials from overseas, the clipper ship was the logical solution to the problem of the supply of raw materials and other high priority cargoes. In this it should be noted that two foremost maritime nations at that time, Great Britain and the United States, were also being highly industrialized. Thus the three factors enumerated influenced the design of sailing ships at that time.

But as ships are developed for high speed, other supplementary factors of operation also must be evolved to attain progress. In this respect, the ship designers of this era were not entirely responsible. They could create a fast sailer but the knowledge of how to obtain the most of these greyhounds of the seas must also be forthcoming and made available to the masters of these craft.

Matthew Fontaine Maury was one of those scientific minded individuals that did something about it. He was a naval officer who entered Annapolis in 1825 and sailed around the world in the course of training as a midshipman. He made notes of certain crudities still then existent in navigation and meteorology. A physical disability was incurred in the line of duty, and as a compensatory assignment, he was given the charge of the depot of charts and instruments such as the U. S. Navy possessed at that time. This depot flourished under his astute guidance and was the forerunner of the U. S. Naval Observatory and Hydrographic Office.

Maury developed original data and made detailed observations of winds and currents. He obtained much of this information by means of special log books circulated to the various ship masters of the time both foreign and domestic. Thus he correlated

this data over a period of years and by this combined action, founded the modern science of marine meteorology. This data when published by the naval hydrographic office was very useful to sailing masters of the clipper ship era and was used to great advantage in sailing great circle routes.

Maury's work led to an international conference held in Brussels in 1853 to correlate international deep sea navigation data for use of all nations on winds and ocean currents. As a result of this achievement, Maury was made a commander in the Navy. With the event of the Civil War, he resigned his commission and entered the Confederate Navy. After the war he lived abroad, but under the amnesty proclamation, he returned to the United States and became Professor of Meteorology at Virginia Military Institute. He was born 1806 and died in 1873.

To commemorate the scientific work of this great man, the DD-401, commissioned in 1938, was named in his honor and served this country well in World War II. Thus the man who supplemented naval architecture of the period of the clipper ship has not been forgotten.

In England, similarly at the time of Maury, Admiral Sir Francis Beaufort (1774-1857) likewise undertook the study of the wind and developed the Beaufort wind scale. In 1806, Beaufort published the wind scale which was accepted by the Admiralty in 1838 and by international agreement in 1874. Beaufort also investigated other phases of navigation. Thus with operational data being compiled on both sides of the Atlantic, little wonder that the clipper ships broke all previous sailing records.

Supplementing the work of Maury and Beaufort was that of Nathaniel Bowditch in the United States. He was an American mathematician turned sea captain, beginning his career as apprentice seaman. He made several long voyages at the end of the century, and while at sea made observations which he later developed into detailed navigational data to improve the science of navigation. His science was based on lunar, stellar, and other physical observations, all of which effected deep sea navigation. In 1802 he published the original "NEW AMERICAN PRACTICAL NAVIGATOR", which, though revised and improved, is still in use today and is the primary publication of the U. S. Navy Hydrographic Office. It is still used by navigators everywhere regardless of radar, shoran, and directional radio compass. Bowditch also edited Hamilton Moore's treatise on navigation. Thus Bowditch who lived 1773 to 1838 left his enduring mark on the science of navigation.

And though history may know more of the achievements of Donald McKay and Isaac Webb and their host of clipper ship designs, the supplementary work of Maury, Beaufort and Bowditch made the way clear to attain the maximum performance of the clipper ships of their day.

Beaufort Wind Scale from Willil L. Nye

For those who have forgotten the Beaufort Scale, it is given below:

0.....Calm (less than 1).
1.....Light Air.
2.....Light Breeze.
3.....Gentle Breeze.
4.....Moderate Breeze
5.....Fresh Breeze.
6.....Strong Breeze.
7.....Moderate Gale.
8.....Fresh Gale.
9.....Strong Gale.
10.....Whole Gale (more than 75 m.p.h.)
11.....Storm.
12.....Hurricane (no sails can withstand).

Revolutionary Gun Boats - from H. S. Scott--from the Daily Oklahoman, Oklahoma City-11-19-52 - Essex, New York- American Ship Sunk on the Vermont side of Lake Champlain during the American Revolutionary War has been brought to the surface. The vessel was one of five beached and burned by Benedict Arnold when his American fleet was shattered by British naval forces in October, 1776. A derrick boat raised the vessel and it was floated by barge to this side of the lake. It will be put in a ship museum

(continued on page 191)

ROBERT B. APPLEBEE

From The Bangor Daily News, Bangor, Maine, November 5, 1952

FORMER U.S. CUSTOM SERVICE EMPLOYEE HAS COLLECTED DATA ON 12,000 MAINE SAILING SHIPS IN THE PAST 30 YEARS.

Robert B. Applebee, whose trim home stands within inches of Stockton Springs, has been listening to yarns spun by old sailors most of his life. He likes them. They make fine listening, he says -- especially the one about wrecks and rescues, or records set by clippers beating around Cape Horn.

But salty yarns, lumberjack tales and stories told by brook fishermen have certain things in common, Applebee feels. His only objection is that more often than not the truth is not in them.

So what he likes even better than salty yarns are cold, hard facts backed by musty Lloyd's registers, and original documents found in little-used library corners or the cob-webbed attics of seacoast homes.

This tidy feeling about maritime truths led Applebee into an unusual hobby almost 30 years ago. Now, retired and 67, the Searsport resident has dug out and compiled typed and bound no less than ten volumes of vital statistics on nearly 12,000 Maine sailing vessels.

It all started back when Applebee began his life-long work in the U.S. Custom Service. Hardly a day went by, he says, that didn't bring a letter or two from someone who wanted to know all about his grandfather's ship--what it was, where and when it was built, and whatever became of it.

RECORDS DESTROYED

The fire which destroyed much of Portland in 1869, also destroyed shipping records, Applebee says, so answering these letters called for a great amount of correspondence, digging into dusty files and old newspapers.

But by the time he had answered one query, he had gathered similar information on many more ships in the process, and the hobby began.

First, it was sailing ships built, launched and operated from the Portland-Falmouth area - about 2,500 in all, the data filling a large folder almost two inches thick. Then came Saco and Biddeford, the Lincoln County towns, the Passamaquoddy district, the Frenchman's Bay area, St. Andrews, and St. Stephen, N.B., the Penobscot River towns, Camden and Rockport. Two more volumes include data on the 250-vessel J. S. Winslow fleet of Portland, and an ambitious collection of facts and figures on 200 more ships of the same area. Other books contain pictures of more than 800 of the same craft.

The entries are cross indexed in a number of ways, so that all information is readily available on a given vessel if only one of several facts about it is known.

All the data, Applebee says, came from original documents, the papers sworn to and signed when the ship was launched and put in use.

Although a large amount of the information was gathered in the years that Applebee worked in Portland, much more came from sources in Washington, where Applebee was transferred several years before his retirement.

There, with access to the files on shipping in the Library of Congress and the National Archives, Applebee's collection grew rapidly.

But two years ago, Applebee received the Albert Gallatin award for outstanding service and was retired.

The Caribou native and his wife then set about finding a place to live. Naturally, in view of his hobby, they chose Maine, and to get even closer to the center of the maritime center of the sailing days, found their present home here in Searsport.

Applebee doesn't plan to use his data for books of his own, but finds more satisfaction in making the results of his work available to others.

And he has plenty of opportunities for no less than 121 people - authors, similar hobbyists and persons who were just curious about their grandfathers - called at the small white house on the town line this summer.

NOTE: Mr. Applebee is a Charter member of the Nautical Research Guild.

RIGGING CAN BE A CINCH

by William N. Frick

Rigging a model sailing vessel should be carried out to the fullest extent possible. Omitting the bulk of the lines to reveal some other feature serves only to destroy the true effect of the model since proper scaling of the various lines and blocks will keep everything in proportion. I believe that too many people attempt to build sailing vessels who do not understand what purpose the various lines served; so first the rigging, both standing and running, must be considered as a complete subject in itself and not just the job that tops off the hull. I found that in doing the work as outlined hereafter the rigging did become a cinch considering the number of lines to be applied and the result that I secured.

Start with the careful study of a complete belaying pin plan while you are working on the hull or before you begin work. This plan will show that there are some 200 odd running lines on a large clipper and that they all fall into definite groups. Bunt and leech lines, braces, clew lines, lifts, sheets, reef tackles, halliards, and downhauls are the main groups. Designation for mast and yards, or sails precede these names. Do not be buffaloed by the Main Topsail Outer Bunt Line for example. Notice that on the plan the lines belaying on the bulwark pin rail run in a definite pattern, the lines for the lower course being first, those for the topsail second, etc.

Each of the above groups has a definite function.

Bunt Lines: Raise the bottom of a set sail so that it can be furled. The number of lines decreases as the sails become smaller.

Leech Lines: Draw the leech of a set sail inward and upward towards the yard in furling.

Clew Lines: Draw the clews of a set sail upward toward the center of the yard.

Sheets: Control sail to catch the wind.

Reef Tackles: Draw the leeches of a set sail upward so that the sail can be reefed. The lower block of the tackle being secured to the reef band on the sail. These lines and tackles all control the sails and are used to trim, furl, or reef a set sail.

Halliards: Hoist or lower yards and jibs, or staysails.

Downhauls: Draw the tack of a jib or staysail downward to oppose a halliard.

Braces: Rotate yards to catch wind at proper angle.

Lift Tackles to cant lower yards when bracing the yards around.

These lines work the yards as compared to the first group which operate the sails. I have omitted the vangs, brails, and bowlines since they constitute only a small group.

With the knowledge of the lines secured start to determine how each of the lines will lead. The only opening through the lower top is of course the lubber hole. Lines leading from the bulwark rail and fife rail could not be lead around the top because of possible chafing on the edges. Therefore these lines must be led through the lubber hole with a straight run to the deck. Notice also that as you progress aft the lower top is no longer an obstacle; so that lines can go directly aloft from the belaying pin to the yard or leader block without any interference. The more study done prior to the actual beginning of the rigging, the easier the accomplishment will be as many problems can be ironed out ahead of time.

To get the full idea of how these sailing vessels were handled I suggest Arthur H. Clark's Clipper Ship Era or C. S. Forester's books on Horatio Hornblower, where in the former sailing day is described in vivid detail while in the latter there are many passages describing the daily operation of a ship on a long voyage such as getting under way, tacking, wearing, reefing, furling, unfurling, and repairing. Much

of this is valuable and clearly described. R. H. Dana's Two Years Before the Mast is equally informative.

In the middle of building a model one could hardly be expected to knock off in order to read a lot of books; but the more you read the more the idea is driven home that "If it doesn't work, it's no good". This is the guiding thought. Models can be seen rigged in such a way that lines could not possibly run. Easy hauling was the result of straight runs with the minimum of leaders with proper size sheaves. Braces leading aft must not interfere with those leading forward. Also remember that lines may appear to rub and chafe when yards are lowered; but when hoisted they run clear of obstructions. Therefore it is best to rig with yards hoisted and then lower them to insure proper lead and once lowered the lines can be secured in their final position.

By learning thoroughly what is involved you are now ready and in a position to start the job and make it much easier for yourself. My model was in the following stage when I started to rig. All masts and yards were complete with blocks and fittings secured in their proper place. Topgallant and topmast shrouds were completely set up and rattled down. Belaying pins were in place in the rails and all necessary blocks for halliards and other tackles were finished.

I started with the mizzen mast and completed it as much as possible after which I went to the main. Also, as will be explained later, I started from the belaying pins and worked up the mast and then outward along the yard. Do the work on the lines leading from the fife rail first thus working from the inside out. As each line is attached to the pin apply a drop or two of varnish and allow to dry before attempting to snip the ends. Lead each line through the lubber hole, or its first leader block as the case may be, pull fairly taut and put a tag on the loose end to assure being able to find it later. These tags are nothing more than small price tags with string attached on which appears the name of the line. The use of the tags to keep the lines marked is a great saver of time and energy. At one stage there appears to be a vast tangle of lines and tags; but once the lines serving the lower yard are tied in at the proper points roughly a dozen will disappear. Do not try to secure all the lines to the pins at once and then start leading; but rather attach the lines in groups of five or six on each side and then moving on.

My rigging rules are:
From mizzen mast forward.
From fife rail outward to bulwark.
From forward of fife rail or bulwark pin rail aft.
From bottom to top.

Here is how the job was done:

Lower Masts -

Set up Deadeyes - Wire lanyards with No. 22 copper wire to hold upper deadeye securely and upright. Do this for all six on one side and repeat opposite.

Lower Shrouds - Loop around mast head and clinch a little below bolster. 1st and 6th shroud stbd side. Next 1st and 6th port. 2nd and 5th stbd. Then 2nd and 5th port. 3rd and 4th stbd. Then 3rd and 4th port. Loop around upper deadeye and secure on self with a slip-knot. Draw taut. Repeat for all. Clinch each shroud with a square knot making sure each knot is on the same level. Secure sheerpole and wrap each shroud the proper distance. When complete apply several drops of varnish and when hard snip ends. Repeat for all shrouds.

Ratlines: Clove hitch the ratlines according to pattern from left to right leaving long ends. Do not draw shrouds together. After applying 1st five ratlines go back and adjust, loosen or tighten as necessary. When satisfied apply drop or two of varnish carefully on each clove hitch and allow

Ratlines (cont'd) to harden. Clip ends close when ready. Repeat all the way up shrouds and on opposite side. Do not remove copper lanyard.

Lower Mast Stays - Pass around abaft mast head over shrouds and through lubber hole. Secure on itself or lead double clinching where necessary.

Topmasts and Topgallant Masts - Dead eyes, shrouds and ratlines should have been set up before the lower shrouds were done and should still be secured with copper lanyards.

Head stays and Back stays - Do not set up yet.

If you are in the mood, this rattling for the lower masts can be done for all three masts or you can come back to the next one later.

Now remove the copper lanyards holding the mizzen lower deadeyes and move the bottom of the shrouds aside. Start to hitch the running lines to the pins at the foot of the mast. Select lines as per table and run through lubber hole tagging as you go and allowing plenty of length for future use. Attach lower yard with all its gear and lead lines serving it to their various points. Keep tags on ends if not finally secured. Next take the first five or so running lines at forward end of bulwark pin rail and run them aloft and repeat on opposite side. Tag these or secure them as the case may be. When you reach the 6th or last deadeye for lower shroud reeve the rope lanyards and tighten a little. Leave long end but do not finally secure.

Rule for Reeving Lanyards - When lanyards are satisfactory to you make sure the dead eyes are evenly spaced and that the sheer pole is parallel with the rail, etc.

Attach topsail yard in joisted position and lead running lines to the various ends. When all these have been lead through the various blocks lower yard to permanent position and take up slack. (I am discussing a model without sails).

Topmast back stays - Loop around topmast head and lead down between cross trees stbd pair first and port pair after. Set up dead eyes as previously explained with copper lanyards and secure backstays, attach sheer pole, wrap, and varnish.

Continue hitching running lines to pins along the bulwark rail doing about five at a time on each side. As you work aloft attach the topgallant back stays and head stay the latter just hanging loose for the time being. Then attach the topgallant yard and lead the various lines to their proper places. Repeat this system until the top is reached. As you go aloft you will notice that there are a number of leader blocks to be secured to the standing rigging or the mast itself which carry various lines, - these can be secured at will; but do not overlook them and don't get them mixed up.

All the braces for the main yards which lead up the mizzen and then forward are now hanging loose and are tagged (I hope). The mizzen running rigging is secure and led; but as yet there are no coils on the pins to top off the job. This was handled as a separate phase.

Coils - Mark a line on top of a piece of wood a foot long 1/8th" in from the edge and drive small nails or pins every half inch along this line. This simulates the actual belaying pin set-up. Measure the distance on your model from the top of the pin rail to the deck and add about 1/8" and draw a line the whole length of the wood on the side. Every half inch directly under the pins on top drill holes 1/8" and insert dowels that will stick out an inch or so. Start at one end and mark on the wood the size line attached to the pin taking one end as the forward end of the mizzen pin rail and work aft.

Wrap line around pin and down around dowel, back up, and down. Use 3 to 5 inches of line according to how large and bulky you want the coils. When you have done some, or the whole side if you want, soak them well with water and allow to dry. This will make them take a definite shape so that they will hang naturally on the pins. When dry remove pins on top of wood and lift coil carefully with a pair of tweezers placing the top that was around the pin on top of the wood on the belaying pin. Adjust the coil so that it is snug to the pin. Now you will notice a natural draped effect which is what you want. The natural effect is everything since coils were not perfectly round and stiff. When you are satisfied with the appearance of the coil apply a couple of drops of varnish to the belaying pin and this will permeate the line of the coil and prevent un-coiling later. Keep applying the coils.

Remember that there are to be over two hundred coils along the various rails and if one is not quite right do not be concerned because the overall effect is the important one. It may take a few trys with the first group; but once the knack is discovered the rest is fun and the result will be very pleasing. The only item to watch for is loose ends sticking out unnaturally.

The mizzen mast is now pretty well completed. The main braces which will lead forward hang loose, as do the mizzen head stays. As you work up the main mast attach these stays in their final positions drawing them fairly tight. The mizzen topgallant, royal and skysail backstays should have their deadeyes secured with copper lanyards to prevent stretching. When you tighten the head stays the mast should have its proper rake or slightly less then when you cut the copper lanyards and replace with cord the mast can be drawn into its proper position and the head stays will have the right tension.

Rigging the main mast is done in the exact same way as the mizzen for both standing and running lines. The final part of this is the securing of the braces.

Braces - If you have followed the belaying pin plan faithfully you will now be able to pick up the braces for the main topsail, topgallant, royal, and skysail yards as you want. Once the main topsail yard is secure and the lines led (make sure you won't have to do any more inside work) attach the braces on each side and finish. The braces for the mizzen yards lead aft and can be attached as you go aloft. Be sure that you are finished working between the mast before securing the braces because it is difficult to work around them.

I found this system worked very well for me and I hope it will for others. But the main thing to remember is to find out all you possibly can about rigging before you start. Most of it is repetition of a few skills over and over again.

GUILD DICTIONARY PROJECT--from John Lyman

The bag this month is three types of "boat" which are new to most dictionaries.

BUNKER BOAT-- A boat used in or near New York Harbor for seining bait for the offshore fishing schooners. "Bunker" or "Mossbunker" is another name for menhaden, which was used as chum for attracting blue fish. (From Miles "Fisherman's Breeze").

BUY BOAT-- A vessel that buys oysters or other fishing products from the fisherman on the fishing grounds and takes them to market. Those that come up the Potomac to Washington today are wooden plumb-bowed motor vessels about 40 feet long, generally with a gaffsail on a single mast. Since oysters cannot be dredged by power vessels, and only very small craft are suitable for ponging, the buy boats perform a necessary function in marketing the catch.

PAY BOAT-- A boat used on a canal to carry the lock-keepers' pay. One 60' long was built for the Chesapeake & Ohio Canal in 1894. As there were 74 locks on this canal, each provided with a salaried keeper, and many almost inaccessible by land, the need for a boat of this nature is obvious.

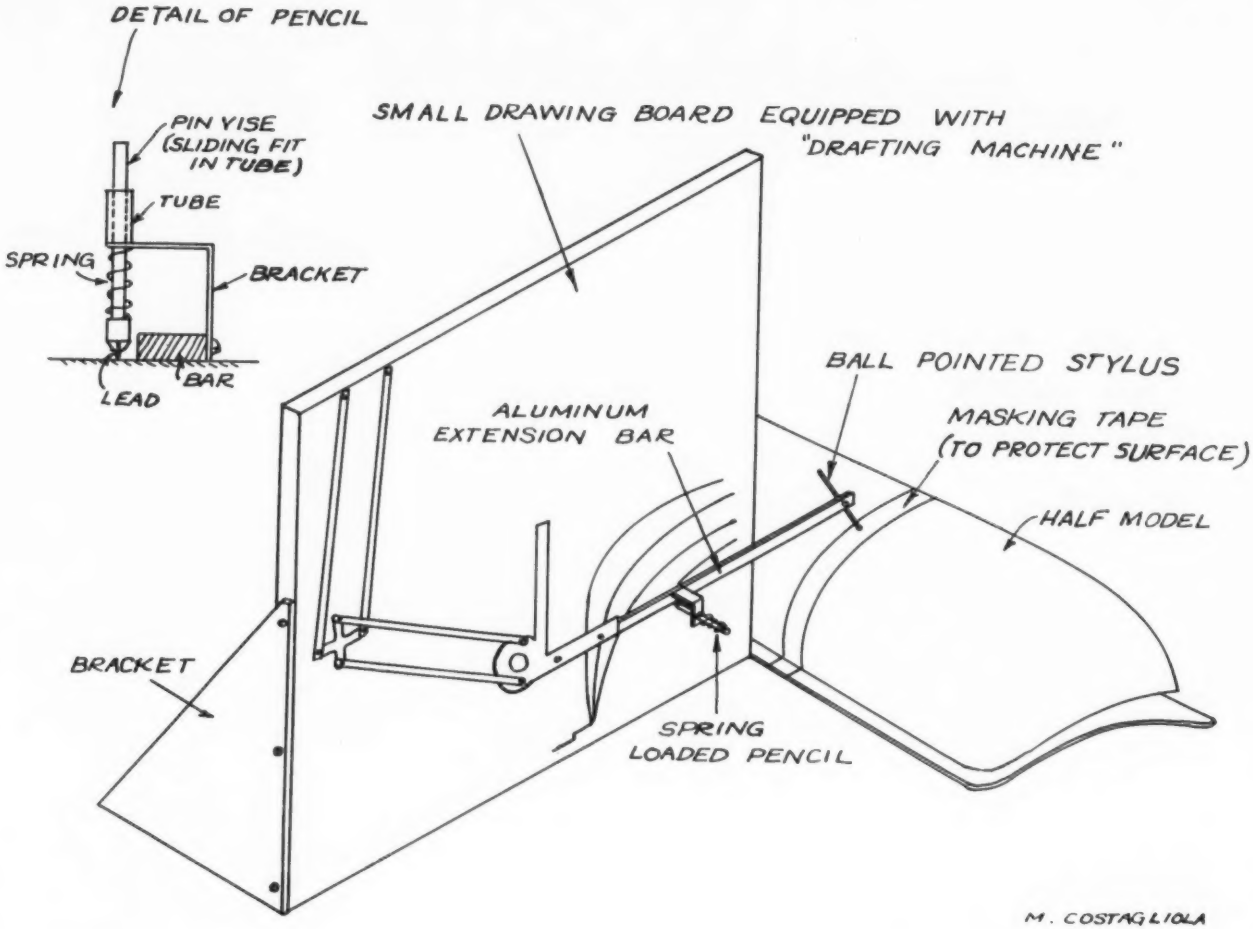
COPPERING BY THE LACQUER METHOD
by Thomas Hornsby

The hull of the model is prepared for painting as usual, by sanding, then shellacking or lacquering with a clear, thinned out solution. Lacquer is preferred, and I find that ordinary linoleum lacquer works as well as any other. Block up the model and scribe in the coppering line; I use a surface gauge with the model placed on a large sheet of plate glass, but any method that will give you a good clear level line will do. Be sure to allow for the greater depth aft if your plan indicates that the vessel has drag. Mask out the rest of the hull above this line, using the new black Scotch electrical tape, or Plymouth Plastic electrical tape which is obtainable in either 1/2" or 5/8" widths. This is far superior to ordinary paper masking tape - it has a sharper edge, adheres better, and it will take the curving line under the bow and stern, which the paper tape will not. Cut a piece longer than the hull, and starting amidships lay it along the line, imparting a slight stretch to the tape as you do so. When it is placed to your satisfaction, burnish down the leading edge with the back of a teaspoon, making sure that the tape clings tightly to the hull. The tape will extend completely around the rudder, and any excess may be trimmed off with a razor blade. Place the model upside down on the work bench on suitable blocks, and place several thicknesses of newspaper underneath to protect the surface.

The copper mixture is made by using 1 part copper powder to 2 parts of clear lacquer; the copper powder is Venus SMOOTH COPPER, which is a finely milled decorator's preparation, and unless this material is used the results will not be as described. A mixture of 1 level tablespoon of powder with two of lacquer will impart twelve to fifteen coats on a hull about twenty-five inches long. Do not use bronzing liquid as the conveyor. Mix this in a small jelly glass adding enough lacquer thinner to make it free flowing, stir until the mixture is free of any lumps of powder. An electric fan is now placed so that the current of air will flow down the length of the hull form, and the copper is brushed on with a one-inch flat camel's hair brush. Start at one end of the hull and work very fast, allowing yourself only 30 to 40 seconds to coat one side. Turn the hull, and repeat on the other side - when the hull is again reversed, the first side will be found to be dry to the touch. Any runs that develop must be brushed out immediately- if the mixture appears to be too thin, stir the copper for a few minutes until it returns to its proper consistency, if it is too thick to brush out- add 1 teaspoon of thinner. A little experience will soon indicate the proper consistency to use, and it will be found necessary to add small quantities of thinner from time to time. Continue as before, coating the sides alternately; as the copper begins to build up, the hull form will take the appearance of a solid bar of copper. Stir the mixture in the glass between coats, the heavy copper powder will not stay in complete suspension. If it is necessary to leave the work for a short time, add a little extra thinner to the glass and stuff a rag in the top to prevent excessive air evaporation. Sanding between coats is ordinarily not necessary, but if it is, use #320 or #400 wet or dry paper, sanding very lightly. I normally continue the coating until the mixture is exhausted, but if at about the tenth coat the surface cannot be improved upon, it might be well to stop. Allow the hull to sit overnight, before stripping off the masking tape, whereupon it may be lightly rubbed with steel wool if desired.

This method is not to be confused with real coppering, either in appearance or satisfaction, but it will coat your hull with a skin of tough smooth copper, at least .002 of an inch thick, and impervious to paint, alcohol, naptha or other solvents. Rinse your brush twice in lacquer thinner, and wipe it out with a cloth, then wash in mild soap and water. This method may also be applied by the spray gun, but the solution must be kept somewhat thinner, and it is then best applied in the open air where there is less danger of the lacquer fumes causing a fire or explosion.

DEVICE FOR TAKING LINES OFF MODEL



M. COSTAGLIOLA

DEVICE FOR TAKING LINES OFF A HALF MODEL
by M. Costagliola

The accompanying sketch shows a device for taking the lines off a builder's half model. The instrument is inexpensive, easy to put together, and works very well. The most important part of it is a small drawing board equipped with a parallel motion "drafting machine". This can be purchased, the price depending upon the size, but can be easily made by anyone handy with tools. The board is then fitted with brackets so it will stand perfectly square to a table on which it is laid.

The drafting machine carries an adjustable square for drawing lines. To this is affixed an aluminum extension bar fitted with a ball pointed stylus at one end and a spring loaded pencil at the other. The pencil should be arranged so that it can be fixed to the bar at any one of several points, depending on the size of the model used. The spring force should be just enough to make a clear line on the paper, but not so much that the lead digs in and tears the paper.

Now the machine is ready to take off lines. The model is laid on a flat surface and stations laid off at intervals along the keel. The machine is set up square to the hull so that the plane of the stylus will be exactly on one of the station lines. Then a strip of masking tape is applied to the model at this station so that the stylus will not leave a mark on the surface.

To take off the shape of the model at the station, all that is required is to follow the surface with the stylus, taking care to keep the bar flat against the board. The pencil will trace the shape of the model on the board.

USE OF LILLS - by Thomas Hornsby

In reading John Flynn's article on hull coppering, I notice his difficulty in removing the heads of lills by the use of the hand grinder, with the liability of the tool slipping off the head and tearing the copper. I suggest that the heads be removed prior to nailing, by hand. From a closed position, slightly open the jaws of a machinist's vise, just enough to allow the lills to be dropped between the jaws in a continuous line, their heads supported by the very small opening allowed. Drop in at least two or three dozen, close together. Clamp the vise tightly, and file off as much of the head as necessary with a flat mill file. Batches of these lills may be made quickly, and the heads will all be uniform.

Many modelmakers object to the imperfect holding power of lills, since their shanks are nickel plated. Years ago someone suggested that the shanks be rubbed across a piece of emery cloth to partially remove the finish; my objection to this is it is very tedious, and absolutely ruinous to the finger tips. My solution to this is to give one good squeeze on the shank of the lill, with a pair of parallel pliers of the Barnard type. The hardened and serrated jaws of the pliers will so notch the shank of the lill, that it will hold as good as any nail.

There are two tricks that may be used to form a head on a lill when it is being driven into the wood. One method is to cut the shank of the lill at an acute angle, a head will automatically form on the side of the longest cut. The other method is to practice, "drawing" the head of the hammer across the lill as it is being driven, by the means of many light blows, paying more attention to the forming of the head than the penetration of the lill at the beginning. This form of rivetting is quite useful in attaching gudgeon and pintle straps to the hull and rudder.

More from Mr. Scott's letter-- This seems to be about the same kind of craft as the PHILADELPHIA. Surely the item has been seen in other papers and by some of the members and I am hoping that some member near there would take the interest to look into it. Wish we could get a story on it. If I were there to take some measurements and pictures. We need a reporter on the job. Would give anything to know just what kind of guns were found, if any. If someone could get enough information for dope I could draw up her lines as we did those of the PHILADELPHIA. Seems to me the PHILADELPHIA is located at Essex also.

NAUTICAL RESEARCH GUILD★
Dedicated to the Era of Sail
SECRETARY'S MONTHLY LETTER
THE SECRETARY'S MONTHLY LETTER WAS ESTABLISHED IN 1948

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MEMBERSHIP CHAIRMAN WILLIS L. NYE
3038 Bridge Street Hayward, California

HARRY D. HAMILTON, SECRETARY-TREASURER 15004 EAST GRANADA AVE. WHITTIER, CALIFORNIA, U.S.A.

QUERIES

Query #223 by Thomas Hornsby, Cheltenham, Pa. -- In reading Duncan MacLean's accounts in "Clippers & Packets" of the clippers of his day, I note the fact that he invariably mentions, "every stateroom has its deck and sidelight". Now these staterooms were below the half poop deck, and opened off a central cabin, therefore these lights must have been cut through the quarter of the vessel slightly below the deck-line at the side. In the case of the clippers SHOOTING STAR, DAUNTLESS, GEM OF THE OCEAN, he mentions in addition, "as substitutes for stern windows, she has patented circular plate glass air-ports", indicating that previously it was usual to have windows cut through the stern, and that the air-port as such was an innovation. Now a deck light I well understand, it is prismatic piece of glass let into the deck, roughly 18" long by 4" wide, and set in a metal frame. It casts a soft mellow light in the interior, but it cannot be opened for ventilation. I believe that the side-lights and stern windows mentioned were possibly small rectangular windows that could be opened in good weather. That they were not circular is indicated by his description of the BALD EAGLE. What was the form of these windows in the packets and early clippers before the introduction of the round metal rimmed air-ports in the early 1850's?

Query No. 224 by Fred Manning, 2059 West 6th Ave., Vancouver 9, B.C. -- Where can I purchase a jeweler's screw plate?

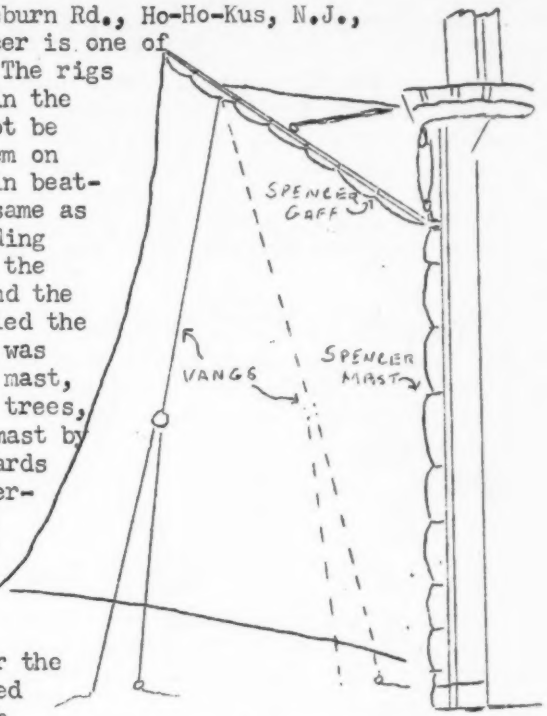
ANSWERS TO QUERIES

Answer to Query #212 of John Minuse- by Winthrop Pratt, Jr.: A Steam Box. I have never used one in all the years of my model work. Wet an old towel, wring it out, and lay it on a board. Lay your plank on the towel, and fold towel over plank. Turn your wife's electric iron up to hottest, and run it over the towel a few times, and your plank is steamed. Believe me, it works. I bent a 1/8" x 1/2" plank around the inside of a water-glass in about one minute. The steam inside that towel is HOT, so keep your fingers off!

Answer to Query #215 of Douglas J. Miller by Winthrop Pratt, Jr.: Plans of 18th Century Merchantmen. Chapman's "Architectura Navalis Mercatoria" published in 1768 has plans of many, including a row galley of Malta, English East and West Indiamen, at least five snows, and dozens of others including warships, privateers, ship boats,etc. This work was reprinted in Swedish at Stockholm in 1769, and from this edition a modern reprint was made at Berlin only a few years ago. Many large libraries have an edition of Chapman, and the German reprint is owned by some model-builders. In any case the plates are sharp enough to make good photostats. There is little material on rigging, but lines, deck layouts and instruction data are very complete.

Answer to Query of Mehrel Shank by Gordon Grant- Box Hauling-- Mr. Shank asked about the operation of Box hauling. I quote from Ansted's "Dictionary of Sea Terms" -"Box hauling is a method of bringing a ship, when close hauled, round upon the other tack when she refuses to tack and there is not room to wear. By throwing the head sails aback she gets sternway; the helm thereupon being put alee, the ship's headway falls rapidly off from the wind, (this because when a vessel is moving backwards the rudder acts the reverse way) which she soon brings aft: she is then speedily rounded to with but little loss ground."

The Spencer - Answer by Alan McKnight, 412 Braeburn Rd., Ho-Ho-Kus, N.J., to Query No. 203 of G. C. Knewston -- The Spencer is one of the least known rigs of the clipper ship era. The rigs efficiency was questionable and much disputed in the days of square riggers. Some skippers would not be without them and some others would not have them on their ships. They were, however, very useful in beating to weather. The rig was set up much the same as a brailing foresail of a schooner, with a standing foregaff, except that instead of the hoops and the jaws of the gaff being large enough to go around the bulky lower masts a smaller diameter spar, called the spencer mast for the man who invented the rig, was fitted from the step on the deck, up abaft the mast, its top being housed in chocks between trestle trees, the jaws of the gaff were held to the spencer mast by the usual parallel strap, and the throat halliards reeved through a double block fixed on the underside of the cross trees, the peak halliard was rigged in somewhat the same way. On later-day craft the gaff was fixed permanently with a chain bridle. The gaff was controlled by means of two vangs, one on each side. The "spencer" was rigged either on the foremast, or the mainmast, or both, and it should not be confused with the "spanker" or "driver" which has a much older origin. I hope my explanation is clear enough, but just in case there is still any confusion, I will make a sketch.



MEETING OF THE SAN FRANCISCO CHAPTER
of the Nautical Research Guild

A meeting of the Guild members in the Bay area is called for December 30th at 8 P.M. Meeting will be held in the San Francisco Maritime Museum. Each member of the Guild in this section is urged to be present and bring a new member for 1953.

Captain Leighton Robinson-- Skipper.

THE GUILD SLOP CHEST -- For those model makers who wish to try the copper lacquer method described in this issue, and have trouble obtaining the material, I can supply the Smooth Copper Powder from bulk at .40 per ounce, enough to do one large model.

Standard type jeweler's horn anvils, about 3½" high. One horn smooth and rounded, the other flat top and sides; both taper to points. Black enamelled round base, top of anvil hardened steel. Price $1.35 postpaid. Both above items may be purchased from Thomas Hornsby, 537 Boyer Road, Cheltenham, Pa.

INTRODUCING NEW MEMBERS

Stephen A. Cisler- 515 Ravencourt Road., Hillsboro, San Mateo, California. "Interested in models. Preferably old sailing ships, river steamboat types, looking for figureheads, steering wheels, ships clocks, lights. Making collection of models of my own make and those from others. Like antique and foreign models."

"Served as ordinary seaman in Dollar Line steamer on Orient run very briefly (one season) between university years. Had my own small craft on Minnesota Lakes, and I just like old ships and sailing."

"Own and operate KEAR, San Mateo-San Francisco, a station specializing in classical music. Also own KXKX (FM) San Francisco, and KXXL, now building at Monterey, California. These stations glad to cooperate with any society publicity, or interest of individual member."

Clark Allan, 4230 Ibis Street, San Diego, California. -- "Ever since I can remember, square riggers have fascinated me. My first drawings and paintings were of windjammers. Strangely enough, tho I have never been a marine painter. I am now engaged on a contract for 42 nautical murals for the Navy Training Station in San Diego; a welcome task. I have built mediocre models for years off and on and lately improved to the point of wanting more research on such as rigging leads for sail tackle, built-up models and how best to seam sails (is there a decent way?). My model building is all lone wolf- I am glad to join a group like the Guild and I am eager to acquire information. If you ever need any ship paintings or the like I'd be glad to give a hand."

Charles R. O. Wood- c/o James Bliss Co. Inc., 342 Atlantic Ave., Boston 10, Mass. -- "Primary interest- American Sailing Navy. Secondary interest- Histories of American Merchant ships. General interests- Anything pertaining to ships." Mr. Wood is buyer of the ship model supplies of James Bliss Co., the well known firm of ship chandlers which sells everything for a sea going ship, as well as a miniature on a modeler's work bench.

Whittier Public Library,- Whittier, California. There must be some ship lovers and nautical minded persons in the city of the Guild's home office, and it is hoped by having our Journal in our local library that we will meet with many of them.

Ralph C. Shepherd- c/o Cornwall, Apartado 570, Lima,Peru, South America. "Square-rigged sail from 1850 onwards, particularly the British iron sailing ship. Am at present endeavoring to collect details of ships built by Walter Hood of Aberdeen, Scotland for George Thompson & Son's Aberdeen Line, known "down under" as the Aberdeen White Star Line. I also collect square rigged ship photographs and am willing to exchange with other enthusiasts.

Deck Fittings (design and development) interest me and I shall be pleased to hear from any one with deck views or other data concerning the different types of capstans, bitts or bollards, etc. fitted in sailing ships.

I am keen on obtaining ship lines of deep water sail and believe that steps should be taken to have the lines taken off of all remaining sailers either active or as hulks for posterity. I have made a good start with the 4-mst. OREGA and barks TELLUS and MAIPO." Mr. Shepherd was introduced to the Guild by Mehrel Shank.

THE GAM CHAIR

Well here we are at the end of our fifth year- and all set and ready to go for 1953- Things have been moving at a comfortable clip all year.... We have many new members but have lost some by the wayside.... This number winds up 1952 with just enough to pay our bills, a condition which befits all non-profit organizations.... Your due bill is enclosed with this issue-- please send your dues promptly, we must strike a monthly batting average on Journal costs.... Each new member has been supplied with the back issues dating from the month of his enrollment- This makes all dues payable January 1st, of each year, and saves a lot of work and bookkeeping.... The putting together of the jig-saw puzzle of the Journal is the Secretary's work, but the writing of the many fine articles is the work of the members, and we know that without this help the Journal could not have continued for 5 years.... We appreciate the help of all hands.... We would like to work out a long distance program for each year and pile up some editorial material on something besides a catch-as-catch-can basis- Get your answers and queries in promptly.... We welcome material in any form, but when you type allow a 3/4" margin both sides of an 8½ x 11" page- this saves transcription time at this office. We, personally, have invested recently in a wire recorder to speed up letter writing and hope soon to get caught up with our correspondence.... The 1952 Roster will be published in January.... Remember, we started the Guild with 5 members and $25.00 - and we have had a lot of pleasure meeting and making friends all over the land and it is the Guild's friendly and cooperative spirit which will carry us on to many successful years.... With Kind Holiday Greetings and our sincere thanks for your help--

Yours-- HARRY D. HAMILTON

Date of Mailing 12/5/52